

**Stronger together**

*Scientists unite in the fight  
against cancer*

**Changing lives**

*Supporting scholars makes  
amazing things happen*

**A passion play**

*Auction loss spawned a  
remarkable mission*

**Issue No. 23**

**2022**

# LEEDS

The magazine for alumni  
of the University of Leeds

## REACH FOR THE SKY



UNIVERSITY OF LEEDS



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### From the Editor

Just how far can a Leeds education take you? One particular answer might be: roughly 250 miles above the city. This issue, we check in with Matthias Maurer, the second Leeds alum to have embarked on a mission to the International Space Station.

Back on planet Earth, and rather closer to campus, we spend time with members of our community changing people's lives in two different fields – increasing social mobility and transforming palliative care.

We also catch up with alumni whose journeys have gone in wildly diverse directions – whether to international influence in literature or social entrepreneurship; the tops of mountains or the Hollywood hills – but which began here.

Leeds is, to paraphrase a well-known TV programme, an adventure in time as well as space: we revisit our experiences as students while helping shape future generations of alumni; our research builds on our past and changes the future. You'll find many examples within these pages.

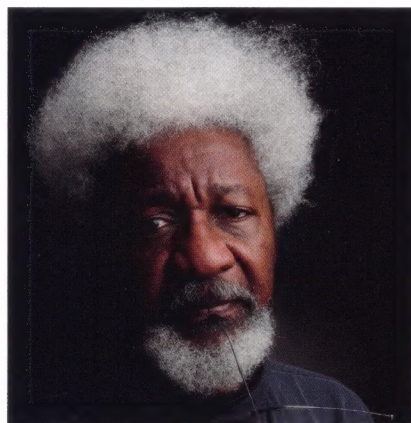
I hope you enjoy the ride!

**Phil Steel**  
(English Language and Literature 1997)  
Head of Alumni Engagement

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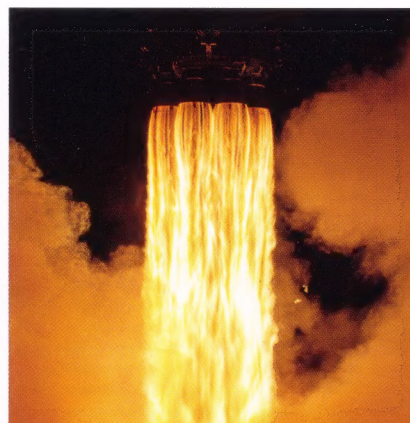
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Leeds magazine is produced annually by the University of Leeds Alumni and Development Team. Opinions of contributors do not necessarily reflect those of the University.

Printed on 100 per cent recycled paper and mailed in paper packaging #2023plasticfree

Cover photo: Astronaut Matthias Maurer, by courtesy of the European Space Agency.

Email us at [alumni@leeds.ac.uk](mailto:alumni@leeds.ac.uk), look for @leedsalumni online.



# COMMUNITY, CULTURE AND IMPACT

Professor Simone Buitendijk reflects on her first 15 months as Vice-Chancellor – and on the part the global Leeds community can play in realising the potential of the University's ambitious new strategy.



**W**hether it's the pride and commitment of our people or the stunning natural beauty of the Yorkshire countryside, this last year and a half has been everything that first drew me to Leeds.

It was strange to start a new job in the middle of a pandemic, but during this time I've witnessed an amazing institution at work, meeting the challenges of Covid-19 while remaining absolutely focused on playing a key role locally, nationally and globally.

There's a real sense of pride here among staff, students and alumni which I don't think I've seen at any other university. We have a shared knowledge that Leeds is a very special place: a strong, outward-facing community focused on making a positive impact on society.

All this is reflected in a new strategy that will guide our progress over the coming decade. It follows an extensive consultation with our entire community, including – of course – our alumni. The strategy sets out a vision for an institution that is led by its values, and harnesses the expertise, creativity and collaborative potential of all its people to help shape a more equitable and sustainable world.

It recognises two key things. First, that our planet faces huge challenges such as climate change, poverty, economic instability and inequality. And second, that research-intensive institutions like Leeds have a distinctive capacity for the large-scale, collaborative, global efforts that are needed to tackle these issues.

Impact is our most important product; our reward is not profit but making the kind of positive difference which the world so desperately needs.

Our work in climate change exemplifies this approach. We come at the problem from many different angles – climate science, engineering, social sciences, policymaking – all of which are strengthened by our partnership with institutions and agencies across the Global South. The questions of our rapidly changing world will not be tackled by experts in just one or two of these areas, but by all of them, in co-operation with each other and with other universities. I'm proud too of

the University's own commitment to achieving net-zero emissions in the next decade.

This culture of inter-disciplinarity extends across campus. Our work in health and medicine harnesses expertise from many different fields, with a determined focus on tackling disease and reducing health inequality. Our new Institute of Textiles and Colour, which draws on expertise in fashion, art, chemistry and sustainability – and has received generous support of the Clothworkers' Company – is a unique selling point for Leeds.

I'm also proud of our commitment to the arts and humanities, areas that are under threat globally, but remain the subject of intense scholarly activity at Leeds.

It's clear from the alumni whom I've met that our former students still feel a tangible sense of attachment to Leeds and a desire to be involved in our mission in the years ahead.

There are many ways that you can help, as ambassadors and supporters of the University – but there is one I would particularly like to mention. A key part of our strategy is to make our teaching and learning more closely reflect the world which our students will enter when they graduate. By sharing your experiences with them, through online mentoring, by giving careers talks or by offering placements, you can help them prepare for the world of work long before they graduate.

You can also learn with us. Digital technology is opening up a university education for more students, wherever they are in the world. Whether you wish to continue your professional development or explore new fields, we will be expanding our portfolio of online courses over the next few years to make our outstanding learning and resources accessible to all.

But something you can only really experience by being here is Yorkshire itself. Lockdown gave me the chance to explore this wonderful county, with its beauty that changes with every season. Even our city offers interesting and tranquil routes; I live close to the Meanwood Valley Trail and walk into campus from Headingley almost every morning. It's a perfect way to clear my head.



## Alumni feature: Wole Soyinka

As a child, Wole Soyinka was nicknamed “the questioner”. It’s a trait that has emerged time and again in a life that has seen him both feted and condemned. Deep into his ninth decade, the Nobel prize-winner continues to question the world around him.

**W**ole Soyinka stole a pen from the prison doctor’s pocket. Some would call it theft. Others, salvation.

A turbulent decade after he graduated from Leeds, Nigeria’s federal military government had sent Wole (English 1957, Hon DLitt 1973) to prison without trial for speaking out against the country’s dictatorship and the civil war in Biafra.

Wole spent 22 out of 26 months of his imprisonment in solitary confinement. He occupied his mind by composing and memorising short and self-contained poems, ready to pounce when a scrap of paper manifested itself. He already had the pen.

These scraps, these “prisonettes”, reflect Wole’s drive and determination to write. They were somehow smuggled out of his cell and eventually landed at the University, which also holds writings from Wole’s more light-hearted student days at Leeds. The works long precede his 1986 Nobel prize in literature and his profound influence on today’s flourishing crop of successful African writers.

Through his harrowing life as a political prisoner, Wole clung to the power of his words to call his captors to account. In his book about the experience, *The Man Died*, he wrote: “Books and all forms of writing have always been objects of terror to those who seek to suppress truth.”

Wole’s deep commitment to speaking truth to power underpins his writing, which includes more than 30 plays,

three novels, volumes of poetry, major critical essays, autobiographical accounts, films and translations.

At the age of 87, he is a towering intellectual figure in a country that has imprisoned him, sent him into exile and sentenced him to death. He’s called out Britain’s colonial role in his country’s history and is an important symbol of the opposition for many in Nigeria and, indeed, across Africa.

Since 1975, Wole has lived the life of an academic, commentator and a creative force both in Nigeria and abroad. Now he is back on familiar ground, once again witnessing and commenting on turbulent times.

Wole, who is most comfortable writing drama, astonished the literary world with the recent release of his third novel, a satire of contemporary Nigeria. So why, after 48 years, write a novel? In an interview with PEN America, he said that no other writing form suited the sweeping turmoil in his country: “The bubble had to burst and spatter all over the place and only the prose form, the fiction form, could contain that spattering.”

Hence, his “gift” to Nigeria, his book *Chronicles from the Land of the Happiest People on Earth*, a cutting look at the nature of greed, betrayal and power. *Chronicles* is a novel of hope and cynicism, of murder and mayhem, and like all Wole’s work, is full of wit, insight and poetic beauty. Part whodunnit, part brutal satire, it includes fictionalised versions of prominent contemporary Nigerians.

The genesis for the novel came, he told PEN, when: “watching one’s own environment, in which one grew up, from which one drew one’s inspiration, developed one’s values related to other people ... just watching all that decay around you in a most violent way – not even a gentle slide into decadence, but violently.”

Just where did Akinwande Oluwole Babatunde Soyinka develop his values?

Wole was born in Abeokuta, southwestern Nigeria, in July 1934. *Aké*, the first book in his acclaimed series of autobiographical works, offers an exuberant account of his childhood. His father was a primary school headmaster and Anglican minister. His mother owned a store and was active in the women’s movement.

He was surrounded by a rich mix of traditions – from the tribal rituals, tales and legends of his family’s Yorùbá culture to the stories told by women meeting at his house; from Christian stories, sermons and hymns to the everyday dramas of school and family life. “I grew up in a really exciting atmosphere of political activism on one hand and more staid political discussions which went on around my father,” Wole told the Academy of Achievement. “They’d debate everything from the world war that was going on at the time to the price of newly-introduced motorcycles.

“The exchange of ideas between adults fascinated me,” he said. Unlike other children, Wole’s presence was indulged by the elder speakers who gave him a prophetic nickname: “I was known as the questioner.”

# THE POWER



**“Sixteen paces  
By twenty-three.  
They hold Siege  
against humanity  
And Truth  
Employing time to drill  
through to his sanity.”**

**From Live Burial, written in solitary  
confinement**

# OF WORDS



At the age of 11, Wole travelled to Ibadan to complete his university preparatory studies, focusing on English, Greek and history. He then came to Leeds to study English literature. He still speaks fondly of his years in Leeds, mischievously calling them his “rascally times”. He last returned to the University in 2015 to give the Leeds Centre for African Studies Annual Lecture, in which he argued that much of the contemporary violence in Nigeria was underpinned by the complete repudiation of dialogue.

At that time, Wole offered a vivid sense of the unique student life of late 1950s Leeds where he met eminent poets and playwrights-to-be Tony Harrison, James Simmons and Geoffrey Hill; Marxist literary critic Arnold Kettle; budding comedian Barry Cryer and many others.

Wole spoke of the great teachers at Leeds and described how he explored the city, visiting “religious institutions of every denomination” to explore spirituality. He explained how the wooden carvings on church pews in Leeds, for instance, helped him see a kind of equivalence with wooden carvings in Nigeria, and how this made him question received knowledge about primitivism.

Wole published his first short story, *Madame Etienne’s Establishment*, in *The Gryphon* in March 1957. His early plays are sometimes known as “the Leeds plays” because initial drafts were made during his time in the city.

After Leeds, Wole became a dramaturgist at the Royal Court Theatre in London. This was a formative time that Wole recalled in his powerful Nobel lecture in 1986.

Wole returned to Nigeria in 1960 to study African drama and teach at universities in Ibadan, Lagos, and Ife, before landing in prison. After his release in 1969, he became Head of the Department of Theatre Arts at the University of Ibadan until he had to flee into exile.

At Ibadan, he was close friends with Martin Banham, who would later become a professor at Leeds and establish the Workshop Theatre on campus. Martin gave the University a collection of materials linked to Wole. Of particular interest are the papers relating to Wole’s friendship with Rex Collings, an important English publisher who campaigned tirelessly for his release from prison. Wole’s prison poems are part of this collection.

### He still speaks fondly of his years in Leeds, mischievously calling them his “rascally times”.

Wole returned to Nigeria in 1975 but left again in 1994 when the military head of state Sani Abacha confiscated his passport, and later sentenced him to death. When Abacha himself died in 1998, Wole finally returned home.

Countless critics have proclaimed Wole to be one of the most creative and exciting playwrights in the English language. The 1986 Nobel prize judges characterised him as “one of the finest poetical playwrights that have written in English”. His plays are rooted in the rich theatrical traditions of the Yorùbá people of western Nigeria. They are vivid, colourful, fierce, funny and

haunting. The early plays offer a gentle satire and reflection of the tensions of a rapidly changing Nigeria while boldly exposing injustice and corruption.

By the 1970s, Wole’s satire had become fierce and angry, and sometimes full of contempt. Only last year, a performance of Wole’s play *Death and the King’s Horseman*, directed by his friend Bolanle Austen-Peters, saw a Lagos audience cheer and cry their way through a work written four decades earlier.

Set in 1944, in the ancient Yorùbá city of Oyo, this philosophical drama has provoked extensive debate about anti-colonialism, political integrity and the need for critical dialogue between European and African cultures.

A remarkable range of activity by young writers, from Yorùbá Opera to new playwriting, has been inspired by Wole’s work as a theatre director and teacher. He founded acting companies that have given young actors and new audiences the chance to see and participate in works of national and international importance.

A master of many literary forms, Wole demonstrates that artists do not have to choose between aesthetics and politics. It is possible to write meticulously crafted, creative works that are simultaneously committed to justice, integrity, compassion and equality.

In his prison memoir, he famously wrote: “The man dies in all who keep silent in the face of tyranny.” His latest novel reflects a lifelong commitment to speaking out in the face of injustice, inequality and corruption, and powerfully demonstrates the enduring role of literature in working towards a better, fairer world.

## Timeline

### 1934

Born at Abeokuta in southwestern Nigeria

### 1957

Graduated, English Literature, University of Leeds

### 1960-67

Lecturer in Nigeria, and active critic of the government

### 1967-69

Imprisoned

### 1971-75

Living in exile

### 1983

Honorary Fellow, Royal Society of Literature

### 1986

Nobel prize in literature “as a dramatist and writer of poetry and prose to problems of general and deep significance for man, modern or ancient.”

### 1994

UNESCO Goodwill Ambassador for the promotion of African culture, human rights and freedom of expression

### 1994

Fled on motorcycle to Benin and moved to United States upon suspension of civil liberties in Nigeria

### 1997

Charged with treason and sentenced to death by Sani Abacha – but returned to Nigeria on Abacha’s death the following year

### 2009

Golden Plate Award of the American Academy of Achievement, presented by Archbishop Desmond Tutu

### 2014

International Humanist Award as “the intellectual leader of distinctively African voices within the universal Enlightenment tradition.”



Alumni interview: Matthias Maurer

# REACH FOR THE SKY

In November, German-born Matthias Maurer (Materials Science, Erasmus Scheme, 1993) began a six-month mission aboard the International Space Station (ISS). Here he tells us about the role Leeds played in his journey to space.

## So how did you become an astronaut?

It was 2008. I saw on TV that the European Space Agency wanted new astronauts and I thought: "What does an astronaut actually do?" The answer is that they are scientists, love technology and work in international teams – all things that made me a good fit for the role.

## But your route to becoming an astronaut hasn't been easy...

It was 13 years between my original application and my first space flight – a long time, with lots of ups and downs. But if you have a dream and want to achieve something, don't let the first obstacle stop you.

## What role did Leeds play in your journey to space?

My year in Leeds was perhaps the beginning of it all. It was an incredibly enriching experience. I was able to immerse myself in the English language and student life, while being exposed to other cultures and languages. I was also able to join exchange programmes in France, Spain and South America. So Leeds really equipped me to be part of an international team.

## Tell us about your mission.

My mission, Cosmic Kiss, is supporting around 150 experiments in areas from human health to materials science, benefiting life on Earth and the future of space exploration.

## Why Cosmic Kiss?

It's a declaration of my love for space, communicating the special connection the ISS provides between humanity and the cosmos. It conveys the value of partnership in exploring further, alongside the need to create a sustainable future on Earth.

## What are some of the mission's challenges?

When the very first astronauts flew, the challenge was the actual flying. Now the journey is fully automated and only takes one day. The challenge of being aboard the ISS is using micro-gravity and performing research you cannot do on the ground.

## But it must be incredibly rewarding.

Being outside in space is every astronaut's dream because you have the best possible view of earth, with just a thin layer of polycarbonate between you and the vacuum of space.

## And the future?

I'm part of a team hoping to put the first European on the moon. We need ambitious people to push the envelope and share their dreams. I'm very positive that I will see people land on Mars in my lifetime. Never stop being fascinated, never stop asking questions – and live your dream!



Follow Matthias on  
Twitter @astro\_matthias and  
Instagram @esamatthiasmaurer



Listen to Matthias's  
My Leeds Story podcast



**Leeds Cancer Research Centre**

# TACKLING CANCER TOGETHER

**Despite major improvements in diagnosis and treatments, cancer still kills around 10 million people a year worldwide. The new Leeds Cancer Research Centre is bringing together more than 250 scientists and clinicians from across disciplines to put Leeds at the forefront of global efforts to tackle the disease.**

**C**uring cancer remains one of the biggest global health challenges. Over the past 40 years survival rates have improved from 30 to 54 per cent, but even so it kills around 450 people a day in the UK alone.”

David Sebag-Montefiore, Audrey and Stanley Burton Professor of Clinical Oncology and Health Research, leads the new Leeds Cancer Research Centre (LCRC): “There’s a great deal more to be done,” he says.

Around the world, the approach to cancer research is changing, recognising that collaboration between disciplines and across international boundaries is critical to accelerating progress in the lab and impact in the clinic. The Centre will harness outstanding strengths from across

the University and Leeds Teaching Hospitals NHS Trust to develop world-leading research that will accelerate and deliver new treatments and technologies to improve patient outcomes.

By bringing together experts in biological, physical, engineering and clinical sciences, the Centre will enable a vibrant interdisciplinary community that will push the boundaries of cancer research, and train future cancer research leaders.

With access to some of the most advanced experimental facilities in the world and a combined funding portfolio of around £125 million, this remarkable community is ideally placed to develop new diagnostics, and improved technologies and treatments, to transform patient care.



Promoting world-leading interdisciplinary research  
– Centre Director David Sebag-Montefiore



## Training our future cancer research leaders

Training the next generation of cancer research leaders is at the heart of the Centre's mission. The University has outstanding research training programmes that are critical to realising this mission, including the Integrated Clinical Academic Training programme, the UKRI Centre for Doctoral Training in Artificial Intelligence for Medical Diagnosis and Care and the University Academic Fellowship scheme.

The LCRC will grow its diverse community, increasing access for those who have not had the opportunity to demonstrate their research potential. Says Adam Nelson, Professor of Chemical Biology: "We will equip a new generation of diverse research leaders by instilling a culture of collaboration, and giving them the essential expertise, tools, technologies, leadership and ambassadorial skills to become the cancer leaders of tomorrow."



Inspiring a new generation – Adam Nelson

Research in the University's Astbury Centre for Structural Molecular Biology studies the biological mechanisms at work in cancers, both to better understand how treatments can be improved and to identify new targets for future drug development. Richard Bayliss, Professor of Molecular Medicine, explains: "By understanding the molecular structures that underpin the biological behavior of cancer, we can work with other disciplines to accelerate the development of new treatments."

Research in the Bragg Centre includes using robotic technologies to diagnose and treat cancer. In one project, scientists are developing robots with "magnetic tentacles" to probe deep inside the human body. Guided by external magnets and 3D imaging, they will biopsy difficult-to-reach cancers, allowing doctors to make an early diagnosis – and give patients the best possible chance to beat the disease.

Leeds is tackling health inequalities across the region, home to around three million people, 17 per cent of whom live in areas of severe social deprivation. The Yorkshire Lung Cancer Screening Trial is one of the largest of its kind in Europe. Funded

by Yorkshire Cancer Research, it takes mobile scanners into shopping centres and car parks to screen patients at risk of lung cancer. So far, more than 100 cases have been detected, allowing patients to receive early treatment.

Susan Short, Professor of Clinical Oncology and Neuro-Oncology, is leading a major clinical trial funded by the Brain Tumour Charity to evaluate combining chemotherapy with a cannabis-based mouth spray for patients with recurrent glioblastoma, a highly aggressive brain cancer. Around 2,000 people in England are diagnosed with glioblastoma each year, and are treated with surgery, radiotherapy and chemotherapy. "Even so, nearly all these tumours re-grow within a year," says Susan. "Unfortunately, there are very few options for patients at that point."

The trial will study the use of the drug Sativex, which contains two cannabis derivatives. It is hoped the treatment could delay progress of the disease and improve patients' quality of life.

The recent designation as a Tessa Jowell Centre of Excellence for brain cancer research recognises Leeds' substantial contribution to tackling one of the most aggressive cancers.

In 2016, many alumni responded generously to our appeal to support Susan's work tackling this devastating disease.

Leeds Cancer Research Centre continues the city's long and rich heritage in cancer research, which includes pioneering research by Professors Moynihan and Golligher, known as the "godfathers" of abdominal and cancer surgery. The National Radium Centre was established in the 1920s at Leeds General Infirmary, relocating to Cookridge Hospital in the 1950s to establish the regional cancer centre.

And the Centre comes at an important time. Cancer cases are predicted to rise steeply in the years ahead – due both to our longer life expectancy, improved screening and diagnosis, and delays in cancer diagnosis caused by Covid-19.

Its work will tackle some of the major challenges of the years ahead: "I'm passionate about bringing together the best minds from traditionally distinct disciplines to solve the big research questions that will improve the lives of our patients," says David. "This simple and powerful objective is at the heart of what we are doing."

**For more examples of LCRC research, see overleaf.**



Working together to understand cancer mechanisms and develop new treatments – Richard Bayliss and his team



Developing new approaches to treating brain cancer – Susan Short

**The use of Tamoxifen, a hormone therapy that has transformed the lives of breast cancer patients worldwide, was developed by Craig Jordan (Pharmacy and Pharmacology 1969, PhD Pharmacology 1973, Hon DMed 2001).**





Assault on the Death Star – PhD student Amy Turner hopes the work could lead to a range of new treatments

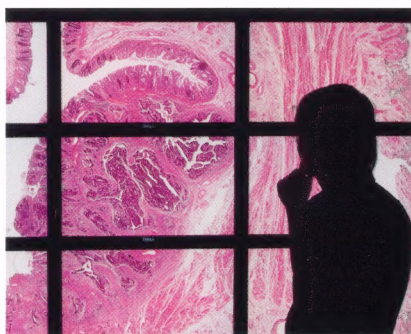
**Leeds scientists have uncovered a new way to target a mutant protein that can cause the deadliest cancers.**

RAS is a protein important for health, but in its mutated form, can lead to the growth of tumours and make cells resistant to cancer treatment. Mutated RAS is associated with over half of all bowel cancers, and nearly all pancreatic cancers. There is only one licensed drug currently available, and it is only effective for a minority of patients.

Now a team from the University has found a new way to target the protein to pave the way for a greater range of treatments for more patients.

The study was funded by the Wellcome Trust, Medical Research Council, Technology Strategy Board and Avacta, and published in the journal Nature Communications. Lead author Dr Darren Tomlinson says: “The RAS protein is referred to as the ‘Death Star’ – and for good reason. It’s spherical and impenetrable, essentially preventing drugs from binding to it and inhibiting its activity.” Using Leeds’s own patented ‘Affimer’ technology, the team has identified a chink in the Death Star’s armour to allow treatment to take place.

Co-author, PhD student Amy Turner says: “RAS really is the Holy Grail of therapeutic targets. The fact that it has previously been termed ‘undruggable’ has allowed us to demonstrate the huge impact our technology can have. This discovery opens the door for the development of new treatments for a range of deadly cancers.”



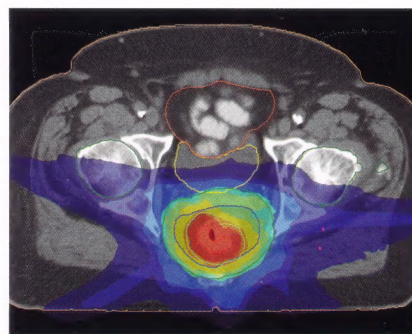
Our digital Powerwall allows pathologists to examine samples of human tissue in incredible detail. Photo courtesy Dr Alex Wright

**A world-leading team of researchers has discovered that a common type of bacteria found in our guts could contribute to bowel cancer.**

Bowel cancer is diagnosed in 1.9 million patients across the globe each year, and it’s the UK’s second biggest cause of cancer death. Professor Phil Quirke and researchers in Leeds are collaborating with an international team of scientists from the UK, Canada, US, Netherlands and Spain. The £20 million “Grand Challenge” project, funded by Cancer Research UK, is investigating how billions of microorganisms impact on cancer risk, development and treatment.

The team has shown that a piece of genetic code found in the common bacteria *E. coli* can damage human DNA in a gene fundamental to the development of bowel cancer. They have also identified 15 different types of bacteria that are associated with bowel cancer – and shown that these are found in patients with colorectal cancer all over the world, despite different diets and lifestyles.

Phil explains: “Our findings indicate that the microbiome is not only capable of initiating bowel cancer but could also be used to provide a more effective bowel cancer screening test, replacing the current approach that relies on the presence of microscopic blood as an indicator of disease. This would allow us to more accurately identify people who need a colonoscopy, and those who could be spared an unnecessary invasive investigation.”



Targeting an early-stage rectal cancer (red) and surrounding rectal lymph nodes (green) with precision radiotherapy, avoiding the bowel (orange) and bladder (yellow)

**We have shown how rectal cancer can be treated with radiotherapy to avoid major surgery and improve quality of life.**

In the UK, 11,500 people are diagnosed each year with a tumour in the rectum, the lowest part of the bowel. For these patients, surgery is a major undertaking and often requires the fitting of a temporary or permanent stoma bag.

With colleagues at the University of Birmingham, Leeds researchers Dr Alexandra Gilbert and Professor David Sebag-Montefiore led a clinical trial to test a pioneering approach using precisely targeted radiotherapy followed by local keyhole surgery to remove the cancer. In this Cancer Research UK funded study, 27 patients received the radiotherapy-based approach and 28 underwent major surgery. When radiotherapy was used, 70 per cent of patients were free of cancer after five years and avoided major surgery.

“We were excited to find that so many patients could avoid major surgery and a stoma bag,” says Alexandra. “They had better quality of life than those who had major surgery and became stronger and regained their social lives much more quickly.”

Leeds was recently funded by Cancer Research UK as a Centre of Excellence for Radiotherapy Research and is now leading a larger study to examine treating rectal cancer through radiotherapy alone. “If we demonstrate that rectal cancer can be treated without even keyhole surgery, this would be life-changing for patients worldwide,” says David.



# PARTNERS IN CARE

A pioneering partnership between the University and St Gemma's Hospice in north Leeds is transforming care for those in the final days of their life.



It was while visiting her own mother on a cancer ward that the importance of palliative care came starkly home to Dr Lucy Ziegler: "I heard a consultant talking to a patient at the next bed. She said the treatment was no longer effective and added: 'I think you should go home and think about putting your affairs in order.'"

"I drove home imagining what I'd do if someone said this to me. It felt like 'get ready to die'. How on earth do you do that?"

The impact of the conversation was compounded the following week by an almost identical conversation between an oncologist and Lucy's own mum, who died a few days later.

"I was no stranger to cancer hospitals – I worked in one – but that day everything I saw and heard took on greater significance. It seemed to me that the patient had been cast adrift without a paddle and it made me want

to understand why palliative care is not routinely integrated into cancer care when patients have advanced disease or their prognosis is uncertain.

"Palliative care can be delivered alongside cancer treatment or come into play when cancer treatment ends. But for too many patients it never comes into play at all."

Palliative care is about maximising the quality of life rather than curing disease, and has been shown to have significant benefits. Even so, less than 0.3 per cent of the £500 million spent on cancer research each year goes to end-of-life care.

A University Academic Fellowship allowed Lucy to investigate some of these key issues. She examined the details of 2,500 patients who had died from cancer in Leeds and found that around a third had not been referred to specialist palliative care; the national picture was even worse.

She uncovered significant misconceptions: "I wrongly assumed that patients would all wish to be free from pain, but this wasn't always true. One patient said that while the painkillers worked well, they made him too tired to drive or see his grandchildren. The pain of not seeing them was far greater than that caused by the cancer."

There are also stigmas to overcome: "Patients told us they didn't fully understand the term 'palliative care' or felt it was synonymous with death. Oncologists said that raising the possibility of involving palliative care felt like they were failing their patients or abandoning them."

As Associate Professor in Palliative Care, Lucy's research has contributed to St Gemma's becoming the world's first University Teaching Hospice. Established in 2011, the St Gemma's Hospice Academic Unit is dedicated to building both research capacity and clinical expertise to improve the care of patients with advanced disease.

Its work both serves the local Leeds community, and meets a growing demand for expertise in the field, providing teaching and clinical placements for 260 undergraduate medical students a year, increasing numbers of whom pursue careers in palliative care.



Dr Lucy Ziegler



Rich Williams (Politics 2004) has known Ben Winston (Broadcasting Studies 2004) since Rich's girlfriend lived in Ben's student house in Leeds. Here he charts his friend's journey from Brudenell Road to Beverly Hills.

**I**n May 2004, Ben Winston was one of six students, three male and three female, sharing a house and preparing for their finals at the University of Leeds. Meanwhile, at Warner Studios in Los Angeles, three male and three female A-List actors were filming the last episode of Friends – 'The One Where They Say Goodbye'.

Fast forward 17 years, and Ben's success producing hit shows like The X Factor, The Brit Awards and The Michael McIntyre Chat Show had catapulted him to the helm of Friends: The Reunion – one of the biggest TV events of the decade.



# THE ONE WITH THE MEGASTARS



Being responsible for such an eagerly anticipated project could give anyone sleepless nights, but Ben was simultaneously juggling his regular job as Executive Producer of James Corden's *Late Late Show* and a mid-pandemic Grammy Awards. Describing the latter as "the hardest show I've ever done, the only one that really gave me anxiety", he decided that once *Friends* was delivered, he would find time to unwind with his wife and two young daughters.

They flew to Mexico, but removing yourself from something the whole world was talking about proved harder than he'd thought: "We walked into our villa feeling all relaxed, but as I turned into the reception and looked at the TV screen, there was a huge advert in Spanish for the *Friends* reunion. I literally couldn't escape it!"



As producer on *The Late Late Show*, Ben juggles a host of big-name guests, and gave the world the phenomenon of *Carpool Karaoke*, where Corden and his celebrity guests sing a selection of hits while driving through LA. Fellow passengers have included Michelle Obama, Madonna and Stevie Wonder. The day before we spoke, Daniel Craig was on set recreating iconic movie scenes.



Ben's taste for a hectic life dates back to his time in Leeds, when he was President of the Jewish Society while working hard on a Broadcasting Studies course that proved a good grounding for his career: "You picked up a camera, filmed, edited stuff and got your hands dirty. I've been in a studio gallery for almost a thousand *Late Late Shows* now, but the first time I sat in a gallery and ran it was at Leeds.

"Being busy held me in good stead for the kind of work I'm doing now. I'd take any opportunity I could."

That's exactly what he did during a gap year before starting at Leeds, when he worked on the set of TV series *Teachers* – and had the chance encounter that would change his life. "I didn't know anybody there, but I made coffees, studied the directors and learned as best I could. I sit here every day and make a show with James Corden, the man responsible for so much of my career, and the only way I know him was because we met on the first day of *Teachers*."

Since graduating, Ben has gone onto huge success, as the ten Emmy Awards in his office testify: "I'm looking at them right now, they're beautiful. But it's bonkers to me, simply insane."

For the *Friends* reunion, Ben and his team spent hours painstakingly replicating the original set – even studying old photos of the dressing rooms, the audience areas and the positions of the lightbulbs. "I wanted them to go into the studio in that opening scene and be transported back in time. You could see the impact that had when they were like: 'Oh my God, this is so weird'."

Like Lisa Kudrow and Matt Le Blanc, Ben has admitted to taking something from the set as a keepsake. "On my wall I've got the yellow frame from the back of the girls' apartment door and the original peephole. I did get permission though!"

He connects *Friends* back to his time in Leeds: "For many people, there's a period of your life, the sweet spot, where you have independence. You've left home but don't have much responsibility – no kids, mortgage or a job that drags you down. Essentially, it's that time in your life when your friends are your family, and that's what *Friends* is all about.

"For me, those years were Leeds."




**Listen to Ben Winston in  
conversation with Rich Williams.**



Ben Winston with  
James Corden (above),  
Michelle Obama (top)  
and Tom Cruise (right).  
Photos courtesy of  
Terence Patrick





**“As a state-school student from a low-income background, I can attest to the significance of outreach initiatives – and the value of a society dedicated to supporting students like us.”**

**ONE GIFT  
TOUCHED SO  
MANY LIVES**



## Supporting students to achieve

Pearls Eddo enrolled at Leeds during the pandemic, one of many who had to adapt quickly to working in unfamiliar surroundings and challenging circumstances. But the support of alumni and other donors has underpinned a remarkable first year in her University journey.

**A**s a student from a low-income background, unable to rely on the financial support of her parents, Pearls had concerns about money, not least because lockdown had a major impact on student employment.

“My parents moved away from Nigeria when they were young, because they wanted to give their future children opportunities that they didn’t have,” she says. “I was brought up understanding the transformational nature of education; I worked hard at school because I always intended to go to university.”

The first in her family to go to university, Pearls began her law course in September 2020, and although she was unable to find a job until the summer term, the generosity of a donor provided the scholarship that allowed her to thrive. And Pearls poured her energy into making a positive contribution to the community, embarking on a mission to address disadvantages faced by others.

With friends, she founded the Leeds branch of the 93% Club. This national organisation aims to address the social mobility gap through workshops, seminars and social activities that give students from disadvantaged backgrounds the skills to become serious contenders in the job market.

As the group’s Schools Outreach Officer, she is helping pave the way for

more students like herself to access higher education. “As a state-school student from a low-income background, I can attest to the significance of outreach initiatives, and the value of a society dedicated to supporting students like us.”

Pearls’s passion for making a difference also led to her successful application to become a Laidlaw Undergraduate Research and Leadership Scholar. This programme operates at more than a dozen leading universities worldwide through the support of the Laidlaw Foundation, established by alumnus Irvine Laidlaw (Economics 1963). It enables talented students to gain the skills and experience to become active global citizens and ethical leaders.

During her first summer as a Laidlaw Scholar, Pearls undertook a six-week research project focussed on raising the attainment of Black and Ethnic Minority GCSE students. She says “I am so proud to have been selected for the Laidlaw Scholarship programme, where I got to meet and work with likeminded and passionate people.”

Through volunteer work with Citizens Advice and Abigail Housing, a Yorkshire charity that supports refugees and asylum seekers, Pearls has also been using skills and knowledge developed in her studies to support vulnerable people. “It has given me a sense of purpose around my studies,” she says. “It has opened my eyes even more to the incredible hardship some face.

“Even if I don’t end up as a housing lawyer or immigration lawyer, just being able to support charities that are doing this work is something in which I take great pride.”

Now in her second year, Pearls is already making an incredible contribution both to the University and to the wider community. And donor support for scholarships was critical to her being able to take up her place and to make such an important impact on society.

“For students from similar backgrounds to mine, there’s always a feeling that you have to work three times harder to access the same opportunities as your peers. These gifts have been so helpful in putting my mind at ease. I don’t have to put as much energy into working out how I’d pay for this society membership or that opportunity – instead I can focus on my studies, developing my leadership skills, and my volunteering.”

**“For students from similar backgrounds to mine, there’s always a feeling that you have to work three times harder to access the same opportunities as your peers.”**



## Support students today

Your support is an investment in the future.  
An investment that ignites potential.  
An investment that helps to break down barriers and tackle inequality.

Please make your gift online either by scanning this QR code using a smartphone or by visiting [give.leeds.ac.uk](https://give.leeds.ac.uk). Giving online is easy and ensures that your support reaches our students as quickly as possible. Your support funds scholarships and other initiatives to enable students from less advantaged backgrounds to come to Leeds, thrive while they’re here and go on to incredible opportunities when they leave us.





## Supporting students to achieve

# HELPING SCHOLARS MAKE THEIR MARK



The support of our alumni can be life-changing for our scholars – and enables these students to make their own mark on the community.

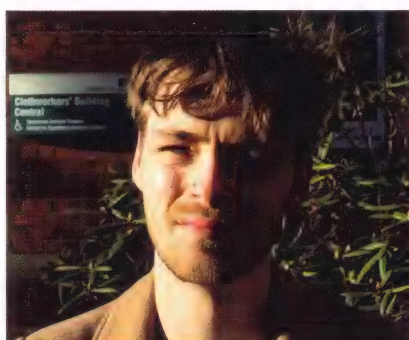
“If people hadn’t helped me along the way, I could have gone down a very different path,” says George Hobley (Criminal Justice and Criminology 2021).

With the support and understanding of a teacher, George learned to manage the challenging behavioural issues of his childhood and turned his life around. When he began his studies at Leeds, supported by a scholarship, George was keen to repay the kindness that had been shown to him – and volunteered at HMP Leeds at Armley to support the rehabilitation of prisoners.

For many of our scholars, the financial support of a scholarship goes beyond simply helping them to meet their living expenses. It opens up a host of opportunities – to volunteer, to take part in extracurricular activities, to develop their talent and to throw themselves into new experiences. Ultimately, it equips them to use their skills and enthusiasm to make a significant contribution to society.

“My experience at Armley allowed me

to help others to get back on the right track, in the same way that I was helped,” says George. The funding played a key role in this: “My scholarship really enabled me to take up this opportunity, as I didn’t have to work full time around my studies to support myself – and it helped me pay for transport to get there.”



**“If people hadn’t helped me along the way, I could have gone down a very different path.”**

Penny Sucharitkul had to overcome more than most to get to Leeds. As a child, she moved between nine schools, missing many months of teaching – and then took on caring responsibilities for her grandmother during her A-Levels: “While my friends were busy revising the week before our exams, I was up in the night caring for my nan. I had to work really hard to get the grades that I needed to enrol at Leeds.”

Penny didn’t let her circumstances define her and with the support of her scholarship she has gone from strength to strength. She used the skills developed in her medicine course and her experiences as a young carer to support the NHS during the pandemic – working as a Health Care Assistant at Leeds General Infirmary. “It was a great way to maintain my clinical skills and feel like I was having an impact during the pandemic,” she says.

Thanks to alumni generosity, she has also been able to take her first steps in the highly-competitive field of vascular surgery, attending conferences, gaining specialist mentors in the field and completing an intercalated year, building valuable research experience on the topic.

Gifts to our Opportunities Fund also allowed Penny to join a vascular surgery skills course: “Participating in surgical courses can be expensive, but gives you a real advantage in showing a commitment to surgery early in your student career. I am now well on the way to becoming a surgeon and academic where I hope I can be a role model for others like me.”

Penny and George’s experience shows not only the many hurdles some students face in taking up their place at Leeds – but also the incredible contributions they can make to wider society if given the chance. As Penny says: “I’ve only been able to get as far as I have thanks to the kindness of donors.”

**Penny and George are just two of the thousands of scholars supported by generous donations to the University of Leeds.**

You can watch Penny and George explain first-hand the life-changing impact of their scholarships by scanning this QR code.





## Supporting students to achieve

# INSPIRING OTHERS TO SUCCEED

For Frank Omare (Chemical Engineering 1987) choosing to give back to Leeds was an easy decision to make. As an experienced mentor and coach he's passionate about making a difference to those from less-advantaged backgrounds and helping young people reach their full potential.

Coming from a working class family, Frank was aware that the odds were stacked against him to attend university, but always had the ambition and desire to succeed, whatever challenges he faced.

"Everyone has the potential to be successful in their chosen career path, when the playing field is levelled through accessing the right support," he says. "I'm a firm believer that whatever your background, if you have the ambition and the desire and are prepared to put in the hard work and commitment you can achieve your goals. Take your talent and develop it, make good choices, study hard – and success is there for you."

From an early age, Frank had a strong interest and ability in science and chose Leeds for the quality and reputation of the course, following in the footsteps of an aunt who studied law and an uncle who studied medicine at Leeds.

Having the support of his family helped him recognise the importance of having positive role models: "Being able to identify and relate to other people like you is incredibly important for young people because it can shape how you view yourself and your role in society. We've made great progress in having more diversity and positive representation in universities, but there's still more to do to inspire people from all backgrounds to succeed."

After graduating, Frank forged a successful career in procurement and supply chain management and combines his work with volunteering with a charity to support young migrants to develop their own careers.

And as a mentor on the University of Leeds Alumni Leadership Mentoring Programme, Frank uses his experience to guide students to make meaningful first steps planning their futures. He has also volunteered as an eMentor, as well as providing financial support to initiatives to help students make the most of their experience at Leeds, regardless of their background.

Explaining why giving back to Leeds is both rewarding and important, he says: "My own experience of studying at Leeds was such a positive one and enabled me to grow as a person. I met some of my best friends at Leeds and was inspired by the quality of teaching, as well as being able to develop my passion for engaging with people."

"I'm proud that I went to Leeds and as a purpose-driven person, one of my core values is to ensure that I'm making a positive contribution. It's important to remember not to think about what you are giving, but instead think about what other people are receiving. Giving back whatever you can is always gratefully received."



Frank Omare

## Our volunteers

**Alumni volunteers share the reasons why they choose to give back to Leeds.**

"I wanted to help students bridge the gap between the knowledge they learn at university and the skills and experience that helps them get their first job. Being able to answer questions and instil confidence in a student is fantastic."

**James Story**

(Cinema & Photography 2012)

"When I studied at Leeds I was surrounded by staff and people who inspired me and supported me. They were my cheerleaders when things got tough, and allies in getting me through my degrees. So I wanted to emulate that for today's students. There are so many ways to get involved, you can find a role which fits around your commitments and works for you."

**Liza Kellett**

(Spanish & Portuguese 1988; MA 1998)

"I was lucky enough to have an external mentor throughout my studies and know how much it helped me and boosted my confidence – I wanted to make sure current students have this opportunity and make a positive use of the knowledge I've gained. It's an incredible feeling to know you're helping others and giving back to the Leeds community."

**Alexandra Mather**

(Civil Engineering 2018)

"I wanted to provide my insight to any undergraduates experiencing the same uncertainties about employment I did when studying. So many people only require a small degree of encouragement to propel themselves into realising their full potential. You never know the true influence you may have on someone by simply uttering a few words of genuine encouragement."

**Jack Johnson**

(Politics 2016)

"The mentor/mentee relationship allows both the established professionals and developing professionals to learn from each other's experiences."

**Lynette Akong**

(Geographical Information Systems 2011)



### Become a Leeds volunteer

Sign up to become a Leeds volunteer today, and support those who follow in your footsteps.

Visit [alumni.leeds.ac.uk/volunteering](https://alumni.leeds.ac.uk/volunteering)



# ON TOP OF THE WORLD

Bronwyn Hodgins (JYA Civil Engineering 2013) looks back fondly to the day she joined Leeds University Mountaineering Club, a decision that would prove a pivotal moment in her life.

“I had no experience at all. I didn’t even know about rock climbing as a sport.”

She loved it: “Climbing was all so new and exciting to me, I was climbing everything – Leeds indoor climbing wall, outdoor crags and of course the famous traverse along the Henry Price flats.”

It was through the club that Bronwyn met partner Jacob Cook (PhD Mathematics 2015): “After my year at Leeds, I returned home to Canada to finish my studies. The day after my final exam, Jacob and I flew to California to climb in Yosemite National Park. Climbing has been my life ever since.”

There have been, in every sense, some major highs. “In 2018 I became the first Canadian woman to free climb El Capitan, a vertical-kilometre face in Yosemite. The ascent took me five days, sleeping in a hanging tent on the side of the cliff and hauling all my food, water and camping gear up behind me as I climbed.” She was also just the third woman in the

world to free climb El Capitan’s challenging Golden Gate route.

In 2019, Bronwyn and Jacob were joined by friends Zack Goldberg-Poch and Thor Stewart on a six-week expedition to Mount Asgard on Baffin Island above the Arctic Circle in northern Canada, paddling inflatable rafts and hiking for 40 miles along fjords and over glaciers simply to establish a base camp in the mountains of Auyuittuq. From there they climbed seven routes – four of which had never been conquered before – and reached the summit of the world’s biggest sheer vertical wall on Mount Thor, over 1,250 metres.

“Yes, climbing is dangerous,” Bronwyn admits. “But it’s important to distinguish between real danger and the feeling of fear. Being high up on a cliff isn’t inherently dangerous, since I’m always attached by a rope. A small fall isn’t dangerous either, as the rope and other protective gear will catch me. But yes, there are dangers like a rockfall from above or simple human error.”

In between the adventures, Bronwyn works as a rock-climbing guide in Squamish, Canada, guiding people up the local cliffs and leading courses to help others develop their skills. Jacob works part-time with the mathematics faculty at the University of British Columbia in Vancouver.

And this winter the pair are heading to Mexico: “There’s a big desert cliff called La Popa,” says Bronwyn. “I have some unfinished business there.”



Bronwyn Hodgins  
and Jacob Cook

**“I was climbing everything – Leeds climbing wall, outdoor crags and of course the famous traverse along the Henry Price flats.”**







# ALUMNI NEWS

Alumni news from around the world.



## Collection complete

Jonny Brownlee (History 2012, Hon LLD 2013) reached the top of the podium at the Tokyo Olympics with Team GB's triathlon mixed relay team. The gold completes Jonny's collection – joining the silver and bronze medals he won at Rio and London respectively. Meanwhile, Chef de Mission Mark England OBE (Economics 1981) ensured the Games went smoothly for Team GB's Olympic and Paralympic teams.



Jonny Brownlee at the Tokyo Olympics

## Linting stays linked to Leeds

Linting Ruan (Music and Management 2019) shared her enthusiasm for the Leeds International Piano Competition with a Chinese audience this autumn. The global competition puts Leeds at the heart of classical piano music by bringing the world's most exceptional young pianists to the city.

Having volunteered for the competition as a student, Linting now works for 'The Leeds' as International Development Manager in China. She oversaw preliminary rounds in China and live-streamed performances from our campus and Leeds Town Hall.



Linting Ruan promotes the Leeds International Piano Competition

## Transporting Ecuador

As Director of the National Transit Agency, Alvaro Guzman (MSc Transport Studies 2010, PhD 2018) has shaped transport in Ecuador. He works with Galo Cárdenas, Adrian Ortega (both MSc Transport Studies 2015) and Allan Peñafiel Mera (MSc Transport Studies 2017) in the private consultancy, CERCANA.

They specialise in sustainable transport and emphasise justice, equity and inclusion. National and local authorities in Ecuador are implementing policies based on their company's report about the impact of Covid-19 on public transport and logistics.



Transport experts Alvaro Guzman, Galo Cárdenas, Adrian Ortega and Allan Peñafiel Mera

## Student house finds fame

The BBC series A House Through Time, presented by David Olusoga (Hon DLitt 2018), examines history through the many people who have lived in a particular house. Series Four focused on 5 Grosvenor Mount, close to Devonshire Hall in Headingley. Those offering expert comment included Henry Irving (History 2008, MA 2010, PhD 2013) and Gillian Cookson (History 1985), while Wendy Bowley (Medicine 2003) was one of several alumni who reunited to discuss its time as a student house.



Historian David Olusoga



## Art of menswear

In these times of unprecedented creativity in men's fashion and reflection on gender, a new V&A exhibition co-curated by Rosalind McKeever (History of Art 2005) will challenge our preconceptions about menswear and reveal historical roots of the styles we know today. The exhibition, called "Fashioning Masculinities: The Art of Menswear", will reveal how designers, tailors, photographers and artists – and their clients and sitters – have constructed and performed masculinity. Rosalind's companion book for the exhibition will be published in March.



V&A curator Rosalind McKeever

## Compression goes large

A student photo society relationship led to Eugenia Balysheva (MA Communications Studies 2008) being named in the top 100 personalities of 2021 by Swiss newspaper Le Temps. As a student, Eugenia told fellow PhotoSoc member Bruno Sanguinetti (PhD Physics 2009) that her digital files were unwieldy. Bruno used his quantum research to invent a compression technology to reduce the size of the files. This developed into their company Dotphoton, now used by the aerospace, biomedical and automotive industries to handle large data files.



Eugenia Balysheva and Bruno Sanguinetti of Dotphoton



Award-winning human resources executive Naveen Bhateja

## HR star

The American Business Awards named Naveen Bhateja (MBA 2007) as their Human Resources Executive of the Year. More than 250 professionals worldwide judged the competition, which honours the achievements and positive contributions of organisations and individuals. Naveen, Chief People Officer at Medidata, was also recognised as one of the 33 most innovative HR leaders by Business Insider.

## Alumni celebrate centenary

Leeds alumni flocked to Facebook in August to wish a happy 100th birthday to Geoffrey Wilson (Civil Engineering 1941, MSc 1942). As the University's Planning Officer, Geoffrey transformed our campus in the 1960s by boldly hiring the architects of London's Barbican Centre for the expansion. From Red Route's "streets in the sky" which help navigate the sloped campus, to the Edward Boyle Library and the Roger Stevens Building, our concrete and glass development spawned imitations at universities across the UK. Geoffrey was also behind a little project called Bodington Hall.

## Floral tribute to educator

A new hibiscus flower named after Leonor Magtolis Briones (Education 1968) honours her long career in education and governance in the Philippines. As Minister for the Department of Education, Leonor is one of many alumni worldwide who have worked hard to keep education on track during the pandemic.



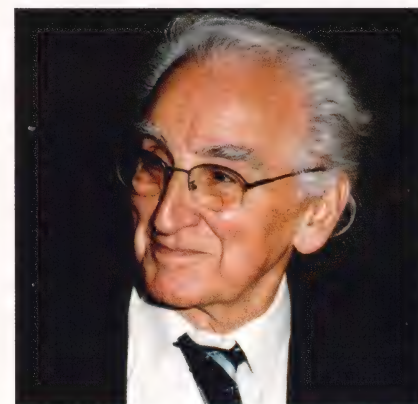
Leonor Magtolis Briones wears the flower named in her honour



Campaigning commentator Jacqui Oatley

## Women's football champion

Sport broadcaster Jacqui Oatley MBE (German 1996) is a founding member of campaign group Women in Football, which champions female talent to bring about a change in attitudes in the male-dominated industry. Jacqui draws on a wealth of experience; in 2015, she broke ground as the first female commentator on Match of the Day.



Centenarian Geoffrey Wilson



## Volunteering

# DRIVING CHANGE

As head of Volkswagen Group UK's operations, Alex Smith is one of the most influential figures in an industry facing seismic change. But he acknowledges the role chance played in his remarkable career journey.



**L**eeds was one of five universities on my UCCA form," says Alex Smith (Geography 1995). "But the School of Geography had a good reputation, and we had family in the area."

Cricket was a big factor too: "Yorkshire were just signing their first overseas players, so I enjoyed afternoons at Headingley watching Sachin Tendulkar and Richie Richardson."

In between, the course proved a real eye-opener: "It had a real breadth and quality. I did two semesters of Canadian studies and discovered an interest in history – something I'd given up at 13. The variety of electives enabled you to join the dots between different pieces of information – and that's something which remains very useful to me."

His career began almost by chance. "I looked at graduate schemes in pharma and supermarkets, but the School of Geography was working with Ford on location planning for their dealer network and that appealed to me. Plus, Ford were offering £500-a-year more!"

It proved a sound choice: "Their training was great. They gave me lots of responsibility early on, in a variety of jobs where I could really learn and gain a wealth of experience."

Alex progressed with Daewoo and Kia before joining Volkswagen in 2007, becoming Director of the Volkswagen Passenger Cars brand seven years later. After a spell leading Nissan's British operations, he returned to Volkswagen

as the Group Managing Director just months before Covid-19 struck. "It's been a strange time to run a business," he reflects. "But we've proved we can adapt and use skills we never knew we had."

Alex is an evangelist for an industry facing unprecedented change: "We are going to see more transformation in the next ten years than we have had in the last century," he says. From 2030 no new petrol or diesel-only cars will be sold in the UK; five years later only new zero-emission vehicles can be sold. The Volkswagen Group is in the vanguard of that change, investing in new models and the charging network needed to make that possible.

"In terms of energy preservation, battery-electric vehicles are the most efficient. The world is capable of producing green electricity, while the distribution network, the pylons, are already there.

"The driving experience is outstanding too," he adds, warming to his theme. When he talks about "instant torque from standstill" and "the lovely low hum" of a "refined driving experience", Alex is almost back as the wide-eyed child first turned on to motoring by an I-Spy book.

He admits that much more investment, on a national scale, is urgently needed to make electric vehicles viable for all. "We need rapid charge points on the motorway and solutions for people who can't charge their cars at home."

With that challenge comes opportunity – and as a Leeds volunteer, Alex

delivered a Masterclass event for Business School students, talking about his own career and the myriad opportunities available to graduates. "Some see our industry as a bit of an industrial hangover," he says. "I have the opposite view. We're investing in electrification, digitalisation, software, the retail network – and in the longer term, autonomy.

"These are characteristics of a fast-moving, progressive industry with an infinite variety of roles, from computer science and artificial intelligence to colour experts and interior designers. And to fill them we need people of all disciplines and backgrounds."

Including, of course, geographers. "Truthfully, I had no idea what I wanted to do after University. If the School hadn't been working with Ford I might never have gone into this industry.

**"But for me geography is about seeing what's in front of you, assessing the situation, predicting the future and taking decisions. These are skills I've used all my working life."**



**Hear alum Natasha Babar-Evans talk about the support she gives as a volunteer**



# YOUR LEGACY, OUR FUTURE

Making a Will is one  
of the most important  
things you will ever do.



By including a gift to the University in your Will, you will join a community of donors helping us nurture the people, generate the ideas and make the discoveries that will change the world for the better.

Your gift could make a huge difference to the lives of our students or push forward research in an area close to your heart.

Dr Moses Batwala (Medicine 2000) is passionate about supporting the doctors of the future, and this has motivated him to pledge a generous legacy to the School of Medicine at Leeds.

“I am delighted to make a gift to Leeds in my Will. Growing up in Uganda, I dreamed of becoming a doctor and studying here made that possible. I want to do all I can to encourage future medics to study at Leeds.”

## EVERY LEGACY CAN MAKE AN IMPACT, NO MATTER THE SIZE

To find out how your legacy could make a difference or to tell us about a gift you have already included in your Will, please contact Sally Hind or use the QR code opposite.

Sally Hind, Alumni & Development Team, University of Leeds, Leeds, LS2 9JT,  
email: [s.hind@leeds.ac.uk](mailto:s.hind@leeds.ac.uk), Phone: +44 (0)113 343 0239.





When Lord Brotherton's first foray into the world of rare books ended in failure, it proved the catalyst for a passion that consumed the remainder of his life – and gave our University a wealth of resources for teaching, scholarship and research.

# A PASSION





“I think of it as the one that got away,” says Rhiannon Lawrence-Francis, Collections and Engagement Manager in Special Collections at Leeds.

In 1922, the City of Wakefield hoped to buy a medieval manuscript containing the Wakefield Mystery Plays – a cycle of religious dramas staged locally from the Middle Ages. It was being sold at auction and the city hoped to keep the manuscript local.

The city fathers approached Dorothy Una Ratcliffe, who in turn asked her husband's uncle, the wealthy industrialist and former Wakefield MP Lord Edward Allen Brotherton, to step in. “He was very fond of his niece-in-law,” Rhiannon explains. “He had lost his own wife and daughter in childbirth and had grown very close to Dorothy.”

The pair travelled to Sotheby's in London, and once the bidding passed the British Museum's own limit of £1,400, Brotherton threw his own weight into the auction, until the price more than doubled. “He was an entrepreneur and he understood money. He would only go so far.”

The manuscript was bought by renowned American book dealer ASW Rosenbach – known as The Terror of the Auction Room – on behalf of Californian railway magnate Henry E Huntington. “At this time the building of libraries was bordering on obsession, particularly among American industrialists,” Rhiannon explains. Their interest in European culture spawned an exodus of cultural treasures.

To make up for Dorothy's disappointment, Brotherton took her to the booksellers Quaritch, where they purchased a beautiful 1681 first edition of *Miscellaneous Poems* by Andrew Marvell. “That was their first rare book,” says Rhiannon. “But I wonder whether, had they been able to secure the mystery play manuscripts, that would have been it – and there would never have been a Brotherton Collection at all.”

# ON PLAY

**“Lord Brotherton decided to collect a library which would compare with The Rylands, the Bodleian and the Bibliotheque Nationale. He learned how these Libraries gave students and scholars opportunities for original research work; that they arranged exhibitions and gave public lectures.”**



Dorothy Una Ratcliffe, address to the University Council, October 1933 (abridged).



## The one that got away

Passion Plays depicting Christ's crucifixion, and other dramas depicting biblical scenes, emerged in the medieval period in cities such as York, Coventry and Chester. The Wakefield Cycle of 32 Mystery Plays was performed by the town's tradesmen and guilds until at least 1576, when the Protestant church forbade any depiction of God, angels or demons.

The vellum manuscript that Lord Brotherton hoped to buy at auction is thought to date from the reign of Henry VII (1485–1509) and covers the whole sweep of bible stories from the Creation to Judgment Day; its use of a 13-line stanza is a distinctive feature of several of the plays. It remains in The Huntington Library in San Marino, California.

As it was, they quickly got the bug and began collecting in earnest. Brotherton decided to create a library representing the whole wealth and breadth of literature. Within a year he had appointed local bookseller John Alexander Symington as librarian at his Roundhay Hall home in Leeds, and together they bought rare books and manuscripts on an almost industrial scale. "It's quite incredible," says Rhiannon. "They would be sent catalogues from auctioneers and from libraries which were being dispersed – and simply buy the whole lot."

Between the fateful auction in 1922 and Brotherton's death in October 1930 they amassed 35,000 books, 400 manuscripts, 4,000 deeds, and 30,000 letters – that's more than 20 items a day. "At the time when they were collecting, not long after the end of the First World War, many booksellers were on their uppers, and buyers got great value for their money."

Among the collection were high-quality examples of incunabula – books printed during the earliest flourishing of typography in the 15th century – early modern and modern books, letters, charters and diaries. "I think they always had an eye on what was going to be useful in the future, but their first love was English Literature," says Rhiannon.

"The Holy Grail of book collecting is a full set of 17th Century folios of Shakespeare's plays. Within four years, Brotherton had acquired all four, including a 1623 First Folio, which he effectively repatriated by purchasing it from the estate of New York industrialist Theodore Vail. They are stunning."

It was fashionable at the time to have books cleaned and re-bound; that Brotherton didn't do this has given Leeds complete, unaltered copies of these rare documents – along with the

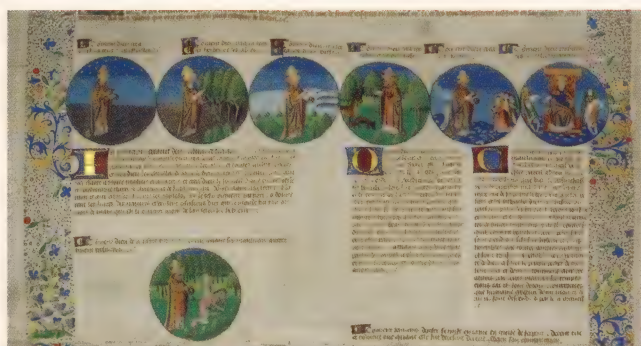
notes, scribbles and annotations that make even printed items unique.

It is unclear when Brotherton decided to gift the collection to Leeds, though this last period of his life coincided with the University's first significant fundraising campaign, one of the prime aims of which was to furnish the institution with a library befitting its growing status.

In 1927, he donated £100,000 to build this new library, which was modelled on the reading room of the British Museum – but slightly bigger. Though he didn't live to see it completed, Brotherton spoke of his hopes when laying its foundation stone: "A great library in a great University is a trust for the nation at large and should not be looked upon as exclusively available for its own students."

It's a principle that holds true today: "Here we are 100 years later and it's exactly what we do," says Rhiannon.

## Historic treasures – some favourites from the Brotherton Collection



This illuminated French manuscript charts the history of the Christian world from the creation to the late 15th century in 18 metres of sheepskin. Written in Anglo-Norman French, it covers the Old Testament, the life of Christ, Greek and Roman history, and Western European history.

In parallel columns it chronicles Popes, Roman Emperors, and French Kings alongside the history of Britain, the crusades and the Latin Kingdom of Jerusalem. It is on permanent display in the Treasures of the Brotherton Gallery, though only a small section of the vast manuscript can be shown at any one time.



While working on a year-long project cataloguing our 15th-century books, Rhiannon became fascinated by this three-volume set of the works of the Roman poet Ovid, printed in Italy in 1477, which have numerous scribbles, doodles and notes alongside the text.

Painstaking research unveiled the culprit: "We now know that most of the drawings and annotations were done by a young man called Oswald von Eck, when he was a student in Ingolstadt in the 1540s. I just had one year to catalogue the incunabula, but there's a whole PhD in these three books alone!"



“The collection is here for everyone. People don’t need any more reason to visit than just wanting to see these books and manuscripts for themselves.”

On his death, Lord Brotherton bequeathed the contents of the Roundhay Hall library to the University, along with the endowment that enables its expansion to this day. There are now well over 100,000 items in the Brotherton Collection alone, and Rhiannon says his influence is still felt as it grows: “When looking at potential new purchases I sometimes find myself asking: ‘What would Lord Brotherton have done?’”

One of the most recent acquisitions is a 1647 volume of Comedies and Tragedies by Beaumont and Fletcher which once belonged to King Charles II. “It was published when the theatres were closed down by Parliament during the Civil War, so there was an added resonance purchasing it when our own theatres were shut during lockdown.”

Some treasures remain elusive: “I really wish we had a first edition of Darwin’s *On the Origin of Species*. We have a second edition, but I’d like a first.

“There’s also a lot more we could do to make this amazing material discoverable, but this requires investment in skilled and knowledgeable people to explore the collection and share their findings. It would be wonderful if every catalogue record could show the complete history

of an item, list all its previous owners and describe its unique features such as annotations, decorations, binding, and inserted material. But that’s very labour-intensive work, and we look after over a quarter of a million books across all of Special Collections.”

The Brotherton Family remains closely involved with the University. The Charles Brotherton Trust supports the library through annual donations and in 2018 established The Brotherton Poetry Prize to promote new and unpublished poets.

In 2016, the family contributed to the establishment of the Treasures of the Brotherton Gallery, which has enabled the library team to focus on engaging the general public with the collection through both a permanent display of highlights and changing exhibitions. The current exhibition, which runs until late 2022, features the story of the Cottingley Fairies – the famous photographic hoax perpetrated by two schoolgirls.

An engagement space allows visitors to get up close and personal with these treasures. “Lord Brotherton wanted his collection to be used, researched, discussed, handled, and most of all enjoyed – and that’s exactly what we make happen. People love the fact they can come and see handwritten items by the Brontë sisters, a lock of Mozart’s hair, a letter from Tolkien to Arthur

Ransome bemoaning the poor sales of *The Hobbit*.”

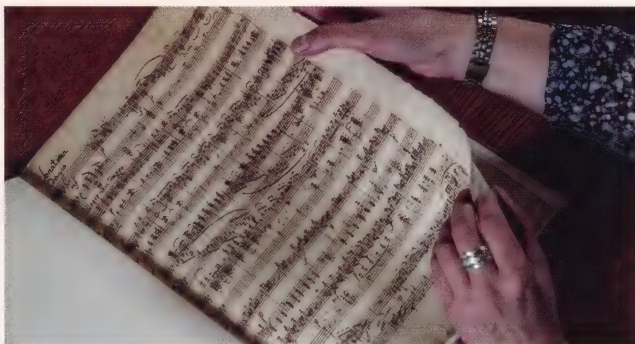
Moving engagement events online during the pandemic opened the collection to a much wider audience – and early in 2022 an online exhibition will celebrate 100 years of the Brotherton collection. “Apparently one of our talks was advertised in New York Public Library. We got hundreds of people from all over the world joining us via Zoom.”

Even so, Rhiannon is delighted to be back on campus: “It’s so exciting to work with these precious materials. It makes you want to get up in the morning. The whole team in Special Collections are enthusiasts and during lockdown we really missed being on campus. It’s great to be back among all these wonderful things.”

**Learn more about the impact that legacies continue to make at the University of Leeds on page 23.**

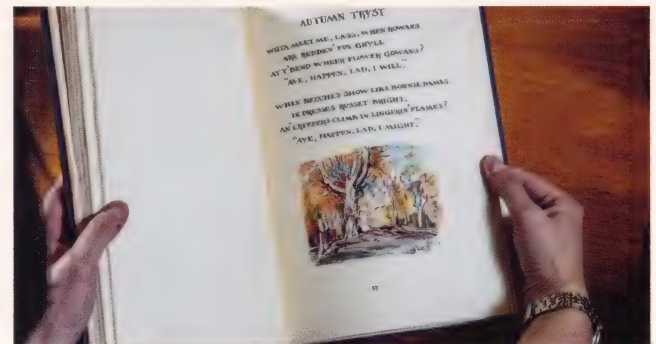


**Head of Special Collections Joanne Fitton talks about how our amazing resources have been amassed over more than a century – and continue to inspire.**



When Lord Brotherton acquired a collection of musical scores from Sheffield organist William Freemantle, he could scarcely have known it contained an unknown manuscript by romantic composer Felix Mendelssohn.

The purchase included a number of Mendelssohn’s handwritten scores – which have long been a highlight of the Collection – but research showed that this 1823 Sonata in B flat minor had never before been published. The Leeds manuscript is the sole piece of evidence for this work; the teenage Mendelssohn even changed its original name from Sonatina, perhaps intending to expand it into a longer piece.



Dorothy Una Ratcliffe was herself a writer, and Dale Courtin’ is a unique collection of her own Yorkshire dialect poetry and was both handwritten and illustrated by her friend Fred Lawson.

As well as working with Lord Brotherton to extend his own collection, Dorothy was a collector in her own right, compiling a library of books, documents and news cuttings about Romany life and culture, which she gave to the University of Leeds in 1950. The Gypsy, Traveller and Roma Collections are one of five Leeds collections that have been designated as “outstanding” by Arts Council England.



Digital technology has the power to open up a university education for more students, whatever their background, and wherever they are in the world. But critical to that is the need to give more people access to the technology that could change their lives. The University's mission to tackle this inequality is under way right here in Leeds.

**I**n March 2020, the University switched almost overnight from campus-based study to online learning. Students who had expected to be taught in seminar rooms and lecture halls now had to access their course by computer.

But long before the pandemic, the University had begun to harness digital technology to create a more flexible way to study – and make learning more accessible to those unable to attend classes in person.



# CROSSING THE DIGITAL DIVIDE



As Deputy Director of the Centre for Research in Digital Education, Dr Bronwen Swinnerton investigates the effect digital technology is having on higher education: “Digital has the power to transform the way we study and teach, and allow many more people to take part,” she says. “But for it to make the biggest difference, we must make sure it’s accessible to every potential student.”

Coming from a less privileged background, the first in her family to go to university, Bronwen is motivated by her own experiences: “I saw education as a route out of my personal circumstances and feel strongly that this opportunity should be available to all.”

For the last 100 years, university study has looked broadly the same. Students have been required to come to a campus and be in residence for long periods. Most learning has taken place in structured, formalised ways, though informal spaces such as libraries and coffee bars have become increasingly important. “For many students, the university experience still looks like this – and will continue to do so,” says Bronwen. “But this kind of learning is also inaccessible to many.”

Even before Covid-19, digital technology had begun to expand that experience, with lecture theatres displaying content on large screens, students using mobile devices in lectures or transmitting their work for the whole group to see, and classes recorded so students can watch again, anytime. Outside the lecture hall, technology plays a still greater role with students collaborating online on group work, consulting library resources virtually and submitting assignments digitally.

Like many other universities, Leeds offers online distance courses that can be taken from anywhere in the world. Bronwen teaches students as far apart as North America, Asia and Africa, with many having full-time jobs and studying part-time. “We provide teaching materials every week and meet online in a virtual classroom where students collaborate, discuss and ask questions. They can prepare for the class when it suits them and we run the live session twice, so students can work around their professional lives, family commitments and in their own time zone.

“For these students and many thousands like them, online provision is not an inferior option, but a high-quality alternative for those who can’t come to campus.”

Bronwen has also explored how digital technology can bring higher education to marginalised communities. A project with the University of Cape Town explored how to make the most of the opportunities offered by digital technology. “South Africa isn’t the poorest country in the world, but it’s the most unequal, with the widest gap between rich and poor. We found tensions between universities’ core business of serving the public good and the cost of developing online education,” says Bronwen. “Creating online courses involves new skills, teams and technical platforms. Universities which partner with private companies can offer online courses more easily and on a much larger scale than those who can’t find partners.”

At the same time, many potential students both in South Africa and the UK find themselves on the wrong side of a digital divide. Students can only join such a course if they have easy access to a digital device and reliable internet connection. They also need a degree of digital literacy: “Many South African students went to schools which didn’t have computers.” This means they don’t have the experience of learning using digital technology, which can put them at a disadvantage.

Even in the UK, a significant minority of the population remains digitally excluded. A study in 2018 found 5.3 million adults hadn’t used the internet in the previous three months; many had never done so. Those on long-term sick leave, those with disabilities and older people – notably older women – were disproportionately disadvantaged.

This divide posed potential problems even closer to home: “90 per cent of our students were learning online during the pandemic, and we needed to ensure that there weren’t groups among them who were disadvantaged by this change,” says Bronwen. Nationally, a significant proportion

of HE students did not have an appropriate digital device or reliable internet. By loaning laptops to students who needed them and providing internet “dongles” for those with no wi-fi connection, the University worked to level the playing field for those most vulnerable to this period of disruption.

Though we’re now returning to something approaching a typical campus experience, the pandemic has accelerated changes that have been happening for some time. “We plan to invest in digital tools and content to enhance students’ education – and support students and staff to make the best use of these,” says Bronwen. “We are developing our use of mobile technologies, augmented reality, and virtual reality to expand what is possible to see, experience and learn at the University of Leeds.

“But we also want to reach beyond our own campus and expand our portfolio of accessible online education for lifelong learning. We’re committed to providing accessible education for all, to better reflect the community we aim to serve.



“Only by continuing to seek out and highlight issues of inequality, can we work to eradicate it – to enable both the University and our students to make the greatest possible difference in the world.”



**Dr Bronwen Swinnerton**



# SHARING SUCCESS

A serial entrepreneur who has sold her businesses for millions, Anu Shah redefines the image of success by donating her fortune and skillset to those in need.





**A**nu Shah (MBA 2012) is clear on what matters most: “I derive joy from giving and impacting on people’s lives,” she says. “Not counting money.”

It’s a remarkable outlook from a businesswoman who sold her first tech startup – EFI Hub, a virtual startup accelerator which supports fledgling businesses in Asia and Africa – for \$10 million and donated her proceeds to the United Nations High Commissioner for Refugees (UNHCR). But for Anu, a woman shaped by humble beginnings, “it wasn’t a difficult decision”.

She traces her accomplishments back to her first job as a 21-year-old in a Mumbai call centre: “When you start at the very bottom, you learn how to form emotional bonds with people. Unless you can connect with others, it’s hard to succeed at any level in business.”

That, and a relentless drive towards her goal, meant Anu soon built on her \$40 savings. “I came from a culture which held women back. My sole focus was to make my own life choices and for that I needed financial independence.”

Emancipation also meant access to education, and freedom to see the world. Anu’s opportunity came with the offer of an MBA at Leeds and a full scholarship. She didn’t hesitate to accept, but resistance at home meant she arrived in the UK almost penniless. “My brother’s education was considered more important than mine. I was ostracised, and that motivated me. I couldn’t afford to fail, or I’d be a laughing stock.”

At Leeds, Anu entered business competitions with prize money attached to help her get by – and won. She joined societies, learned Spanish “in case the opportunity came along to work in Europe”, and ran the Leeds Indian Student Association. She

studied hard and came top of the class. “I made the most of my time at Leeds. Succeeding as an immigrant gave me the confidence I needed.”

The foundation set for a global career, roles followed at Ernst & Young, AT Kearney and Acorn Capital in Singapore, Dubai, and London, before Anu enrolled for further study at Harvard.

But even then, a business trip to Rwanda in 2016 where she met the CEO of a craft brewery played on Anu’s mind: “She was the victim of domestic abuse, yet she stood against the odds to build her business, and was committed to empowering other women in the community, too.

“I had the idea that I could replicate a Silicon Valley model – where promising entrepreneurs receive funding and support, and it is easier to scale up – and apply it to help businesses like hers in emerging and frontier markets.”

**“If we can use capital and skill to support others, to encourage further study, or help them reach the next platform, that’s a unique gift we can give.”**

“Humbling” months volunteering at refugee camps in Africa reinforced Anu’s desire to use her business acumen for good. Such was her conviction, she dropped out of Harvard to pursue the new venture and founded EFI Hub.

“It was difficult,” she says. “As a first-time entrepreneur in tech, it is hard to get buy-in from your own

employees, let alone investors.” Anu applied the same diligence that had taken her so far. All the while she continued to support causes close to her heart, joining the board of the America India Foundation, raising \$2 million to support girls’ education and reduce infant mortality in India. After the growth and sale of her business, there was no question where to put the proceeds.

“Successful entrepreneurs tend to become venture capitalists and invest in other startups. But if we can use capital and skill to support others, to encourage further study, or help them reach the next platform, that’s a unique gift we can give. I had no aspirations to become a millionaire, and my experiences taught me that having an impact on lives is the most important thing.” Her final gift to UNHCR amounted to \$7 million.

Anu has replicated her entrepreneurial success with two further startups, alongside volunteer roles at the UN supporting youth gender equality and the status of women in developing countries. She gives time to support fellow female entrepreneurs on various programmes by mentoring, delivering seminars and consulting.

In 2021, Anu joined Facebook as a product manager, an opportunity to “finesse” her skillset by working alongside top mentors. But after all the accolades, which include becoming the first Leeds winner of the British Council Global Entrepreneur Award, is she motivated to return to entrepreneurship any time soon?

Anu smiles: “These are small building blocks. I am still working towards that defining thing which will leave a true legacy in the world.”

**Leeds alumni are shaping the world around us. Meet some of the entrepreneurs who have been able to transform their business ideas into reality.**

#### **Freddie’s Flowers**

**Freddie Garland** (Music 2010) founded a subscription flower service in 2014 from his parents’ garden. The business now has a £30.3 million turnover, employing 150 people and delivering flowers to 110,000 customers.

#### **Inclusive Trade**

**Rupa Ganguli** (MSc Textile Management 2001) set up her first business in the markets of Mumbai at 17. Today, she’s CEO of Inclusive Trade, connecting artisan brands with consumers keen to make ethical lifestyle choices.

#### **Chilly’s Bottles**

**James Butterfield** (Management 2011) is Founder and Managing Director of reusable water bottle business, Chilly’s Bottles. James devised the idea while at Leeds, and it is now one of Britain’s fastest-growing private companies.

#### **DOMU Brands**

**Mark Januszewski** (Economics 2003) and **Craig Foster** (Economics 2003) set up home kitchen and garden eCommerce company DOMU Brands in 2009. In 2020 the company employed 115 staff and had a turnover of £75 million.

#### **Abel & Cole**

In 1988 **Keith Abel** (Economics and History 1986) began selling potatoes door to door. Abel & Cole is now the UK’s biggest organic home delivery service with a turnover of £13.5 million and an ethos of sustainable development.



# HISTORY IN THE MAKING

The completion of the Sir William Henry Bragg Building marks a defining moment in the University's mission to address 21st century challenges.

The stunning new building brings together the School of Physics and Astronomy, the School of Computing and the Bragg Centre for Materials Research to create an engineering and physical sciences hub. First-class laboratories and specialised teaching spaces will foster world-leading research and an outstanding student experience – but its capacity for inter-disciplinary working and collaboration with industry breaks traditional boundaries to have a positive impact for all society.





**A**s researchers, students and industry experts walk through the doors of the £96 million building on Woodhouse Lane, they are greeted by a bust of Sir William Henry Bragg and his Nobel medal. The building is a fitting tribute both to William, Professor of Physics from 1909 to 1915, and to his son Lawrence. To this day, their work has many applications – from drug development to computing, medicine to astronomy.

In a Leeds workshop, William and Lawrence built the first X-ray spectrometer which was used to measure the way X-rays scattered. By directing them through matter and recording the resulting diffraction pattern on photographic plates, the pair determined the atomic structure of crystallised materials. Ever since, X-ray crystallography has been used throughout the world to reveal the structure of molecules fundamental to life.

“The father and son team embodied everything that is good about science,” says Professor Nora de Leeuw, Executive Dean for the Faculty of Engineering and Physical Sciences. “They were curious, creative and prepared to think beyond traditional subject boundaries. The building that takes the name of Sir William Henry Bragg will continue to foster that philosophy.”

Work began in May 2017 with the clearance of an office building, plumbing and locksmith workshops and an old boiler house. The Portland stone façade of the Grade II listed Old Mining Building, built in 1930, was retained and incorporated into the design, blending the past with the present. Behind it, a walkway connects a new seven-storey glass-and-steel complex with teaching rooms and laboratories designed to meet the rigours of 21st century science.

“The building houses some of the most advanced research facilities in the country,” says Nora. Take for example the 3,000m<sup>2</sup> basement, dug into the bedrock to ensure the vibration of passing traffic does not interfere with ultra-sensitive instruments. Individual quiet islands – raised platforms fitted with vibration-cancelling systems – reduce interference still further.

The laboratories provide the highest specification research environment: temperature and humidity can be monitored and adjusted; electromagnetic interference is controlled; air is filtered through a high-efficiency particulate-absorbing system; yellow light laboratories are provided for bionanotechnology and soft matter physics materials; clean room facilities ensure the eradication of contaminants. Just as the Braggs left their legacy upon the world, such a sophisticated facility is an investment in the University’s research capability for years to come.

In a similar vein, the state-of-the-art teaching spaces provide the perfect setting to develop the next generation of scientists. Digital technologies and audio-visual facilities offer opportunities for blended learning and knowledge-sharing around the globe.

**“Sir William Henry Bragg’s work has shaped modern science. And it is my firm belief that the research conducted in the building that takes his name will extend that legacy.”**

At the heart of the design is an ethos of breaking down traditional boundaries. In robotics, for example, the new space will allow computer science experts to work with colleagues from electronic, electrical and mechanical engineering. It’s a theme reflected in a new sculpture by artist Sara Barker, gracing the exterior and entitled ‘The Worlds of If’ – a reference to the possibilities unlocked when experts share ideas. Inside, the bright atrium, café and social areas provide a hub for interaction between academics from a variety of fields, and with industry partners.

“Experience tells us that the big questions in science will only be tackled when researchers from different disciplines collaborate on solving problems,” says Nora. “The building is a place for people to do that, bringing together scientists – and often artists – in the quest for new understanding and insight.

“Sir William Henry Bragg’s work has shaped modern science. And it is my firm belief that the research conducted in the building that takes his name will extend that legacy.”

**Sir William Henry Bragg and his son Lawrence paved the way for countless scientific and technological breakthroughs by revealing the arrangement of atoms in crystals. The Braggs began their work on crystallography in 1909, and within six years they had received their Nobel prize. Such immediate recognition testifies to the importance of their work.**

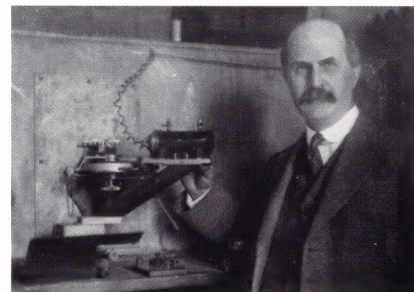
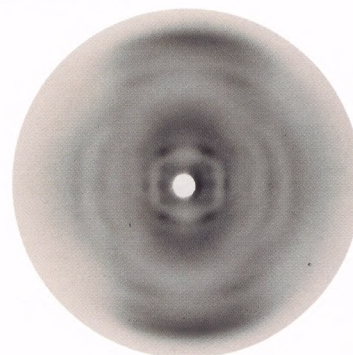


Image courtesy of the Royal Institution Archive

**William is pictured in 1922 with the spectrometer that he and Lawrence built to allow them to understand crystal structures, making it possible to develop new and better materials. Numerous scientific advances – including medical ultrasound devices, fuel injectors in cars, and sonar in submarines – all rely on materials that were developed using X-ray crystallography.**



Special Collections, University of Leeds

**PhD student Florence Bell used X-ray crystallography to take some of the earliest photographs of the structure of DNA while at Leeds, including the one above. In a paper published in Nature, she described the structure as “a pile of pennies”.**



**A blue plaque on the Parkinson Building celebrates the Braggs. In 2013, an online vote of 80,000 people named their work as the third most important British innovation of the 20th century.**



Three areas of the Sir William Henry Bragg Building showcase the power of collaboration between Leeds researchers and industry to tackle societal challenges.

### Bragg Centre for Materials Research

It is fitting for a city steeped in textiles history that Leeds is world leading in materials research.

Founded in 2019, the Bragg Centre for Materials Research provides cutting-edge facilities for a creative community of 250 members from across engineering and physical sciences, biology, medicine, and the arts who aim to discover, create and design new materials that address fundamental scientific and global challenges. Now, with the new building providing a focal point for their work, the impact will only grow.

“The outstanding facilities in the Bragg Building will allow us to engineer materials at the atomic and molecular scale, and undertake internationally leading science and engineering,” explains Professor Edmund Linfield, Director of the Bragg Centre for Materials Research.

Take for example the FIBSEM-SIMS facility, which allows for 3D nanoscale chemical analysis. This will fill a pivotal imaging gap for the analysis of important, hybrid materials used in a wide range of medical, chemical, structural and electronic applications.

It is such real-world applications that are so important: “The new building helps us to bring together people across campus alongside external professionals to find out what their needs are and help to meet them,” Edmund explains. “It means we can respond to real societal, economic and technical challenges.”

**“The potential of these facilities to attract the very best international researchers and support to Leeds is extremely exciting.”**

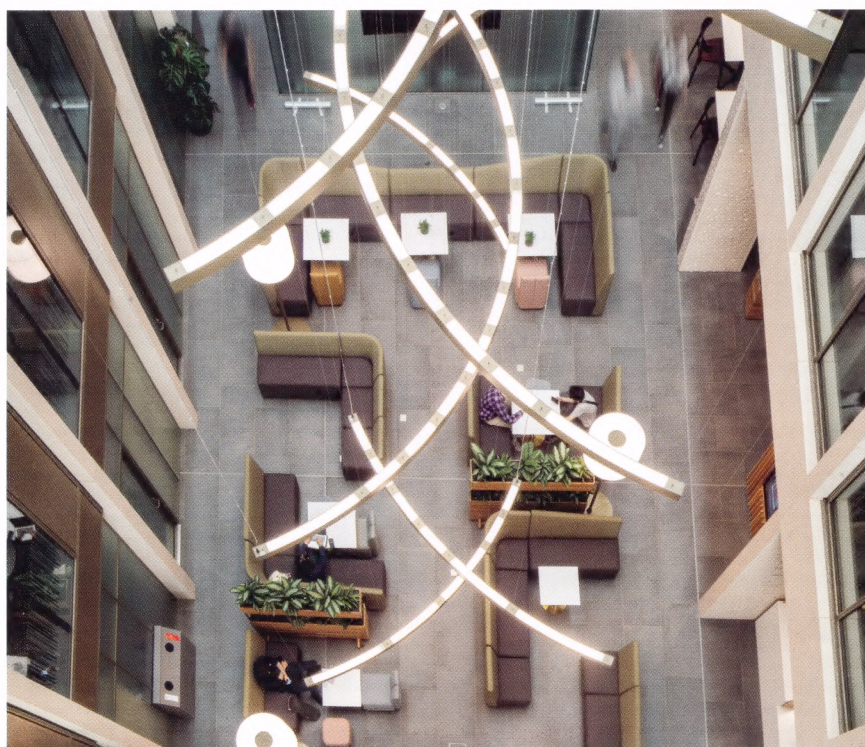
One of the challenges already being investigated at Leeds is the transition to a net-zero-carbon-emitting economy. Working with the Henry Royce Institute – the UK’s national institute for advanced materials of which Leeds is a founding partner – a road-mapping exercise has identified the critical role new materials and processes can play in delivering energy-efficient electronics. By developing semiconducting, superconducting and magnetic materials, researchers are making these energy-efficient devices a reality.

Collaborating with the Leeds Teaching Hospitals NHS Trust, world-leading bionanotechnology research will directly impact healthcare. For example, the development of organ-on-a-chip systems – chips lined with living human cells and fluidic channels to recreate conditions in the body – will allow researchers to test the impact of drug treatments, leading to more effective drug development. Smart and responsive materials developed in the building will be used in stem cell therapies and targeted drug delivery.

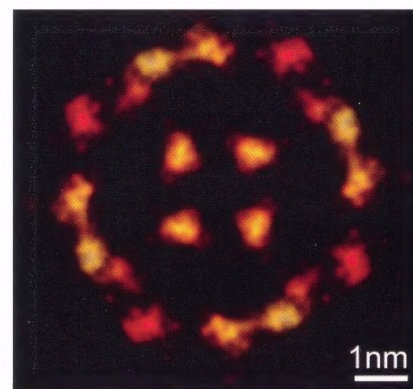
The Bragg Centre’s cross-departmental collaboration is so aligned to the Bragg building’s ethos that Edmund can only see it flourishing in its new home: “We will be able to strengthen our interdisciplinary research partnerships and deliver sustainable solutions to global challenges. The potential of these facilities to attract the very best international researchers and support to Leeds is extremely exciting.”

### Wolfson Imaging Facility

The basement of the Bragg Building will house the Wolfson Imaging Facility. Supported by a £750,000 donation from the Wolfson Foundation and a further gift from Dr Chris Poynton (Chemistry and Earth Sciences 1970), its instrumentation is enabling scientists to see molecules interacting in real time – more rapidly and accurately than ever before.



The light-filled atrium provides social breakout and collaboration space.



Localization atomic force microscopy shows the surface structure of a bacterial aquaporin membrane protein.

“Currently, methods to study molecules in atomic detail typically involve a static snapshot,” says Dr George Heath, Academic Fellow in the School of Physics and Astronomy. “But a new generation of high-speed atomic force microscopes can capture data very rapidly, almost every millionth of a second. The collection of data is so



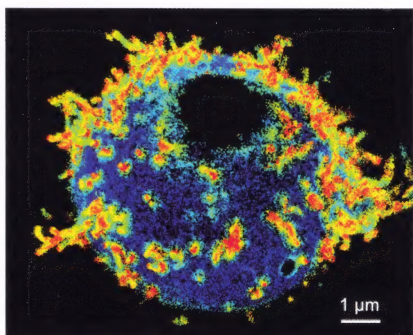
fast, we can generate videos of molecules in action. This is a very exciting news for UK science.”

Super-resolution fluorescence techniques can be used to see fine details down to the scale of 20nm (a nanometre is one billionth of a metre), and fluorescent dyes and lasers are used to highlight the target molecules and see molecular motion across an entire cell in real time.

**“By making our facilities available to scientists around the world, new discoveries and expertise can be rapidly shared so that the entire community can benefit from this investment.”**

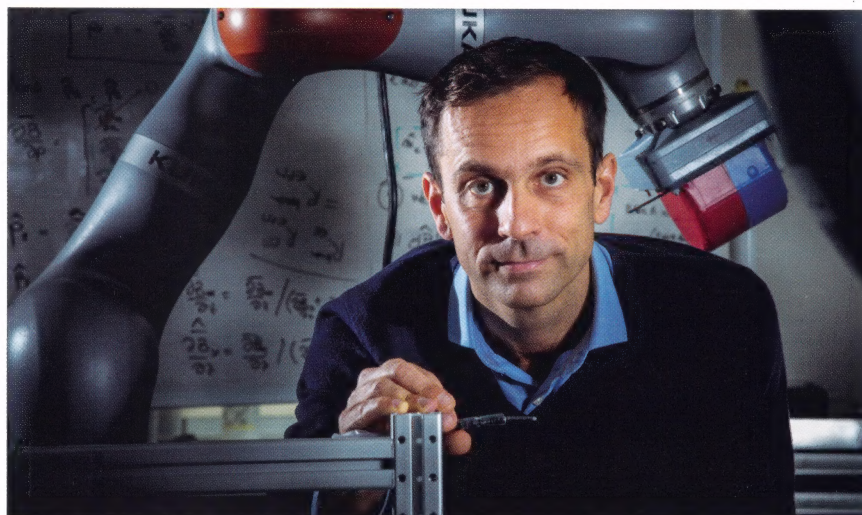
The implications are cross-disciplinary, and the £3.5 million investment brings together two research centres at Leeds: Astbury Centre for Structural Molecular Biology, which investigates the molecular basis of life, and the Bragg Centre for Materials Research. In medicine, the ability to see how a particular molecule behaves in a cell, interacting with neighbouring structures, will give important indicators of whether a cell is healthy or a disease process is starting. Researchers will be able to watch how viruses attack cells, how immune cells get ready to attack their targets, and how potential new drugs interact with molecules.

Professor Sheena Radford FRS, joint lead on the Wolfson project, said: “We will make the facility available to all scientists with exciting questions to answer from across the UK and even further afield. In that way, new discoveries and expertise can be rapidly shared so that the entire community can benefit from this investment.”



Super-resolution microscopy highlights fine detail in a T-cell membrane –the body’s immune cell.

Professor Pietro Valdastrì leads the STORM Lab, where he is developing the use of magnetic manipulation to guide an endoscope during a robotic colonoscopy.



### Life-saving robotics

Access to a 150m<sup>2</sup> mock medical operating theatre will allow the Robotics at Leeds research group to develop life-saving robotic systems for medicine and healthcare.

The Leeds Science and Technologies of Robotics in Medicine (STORM) Lab strives to enable earlier diagnosis, wider screening and more effective treatment for disease, and is led by Professor Pietro Valdastrì.

There are many potential benefits to their work. Surgical robots amplify the perceptual and manipulation capabilities of surgeons, giving them added precision and dexterity. Increasing the distance between surgeon and patient can reduce the risk of disease transmission, an issue brought into sharp focus by the Covid-19 pandemic. But the translation of a successful prototype to human trials has sometimes proved an obstacle in realising the potential of such technology – they are often too impractical to be integrated into an operating room.

A mock operating theatre, which a gift from the Garfield Weston Foundation will move forward, allows researchers and clinicians to address this challenge together. Leeds researchers will be able to co-design solutions with clinicians, healthcare providers and patients; they’ll ensure the equipment is effective in hospital settings by simulating the clinical workflow; they’ll train surgeons in using the new tools. Feedback during early stages can accelerate the lab-to-patient development of life-saving technologies.

“Having access to a realistic clinical environment will allow researchers to evaluate how clinical staff interact with robotic platforms,” Pietro says. “This will help us get our ideas and inventions working in the real world much more quickly.”

At Leeds, those technologies include robotic colonoscopy for colorectal cancer screening and surveillance, which combines robotics and magnetic manipulation to gently guide a flexible endoscope through the colon, replacing the painful ‘push’ mechanism of traditional approaches and removing the need for anaesthesia. The team is also developing magnetic tentacle robots to deliver image-guided therapies and personalised treatment in lung, pancreatic and deep-brain cancer.

In short, robotic technologies developed in the Bragg Building could help ensure the earlier detection of cancer, create effective new treatments – and save lives.

## 15,700m<sup>2</sup>

of floor space created.

## £96.2m

investment, the largest single-project investment ever made on campus.

## Excellent

The building’s BREEAM rating for sustainability, the world’s leading sustainability assessment method for infrastructure and buildings.





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## GONE AWAY

Have we sent this magazine to someone who no longer lives at your address? Here's your chance to tell us. Thank you for reducing waste.

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Open the camera or QR scanner app on your smartphone or tablet and hold your camera over the QR code above. The phone should automatically scan the code. On some devices you may have to press a button to snap a picture. Your smartphone will read the QR code and navigate you to the Leeds alumni website. You will then be able to update your details and communications preferences on our website.

